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10/009,250

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Mario Molinari

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EXAMINER

LIU, JONATHAN

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/009,250 | MOLINARI, MARIO | |
| | Examiner | Art Unit | |
| | Jonathan Liou | 2663 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 12/05/2001 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Foreign Patent Document EP 0895380 A2 is not provided by applicant; therefore,

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 49-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 49, the sentence, "the ESH packets to the nodes of the second set with a frequency the same as an average generation frequency of LSPs by the first set of further systems" is not clear to the examiner what is the an average generation frequency of LSPs. In addition, the LSP should be defined in the claim language itself although it has been defined in the specification.

Regarding claims 50-53, these claims are dependent of claim 49; therefore, they render the same rejection as claim 49.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Ambrosoli et al. (TMN architecture for SDH networks using IS-IS routing protocol design and performances)

Regarding claim 28, Ambrosoli et al. teaches a communications arrangement forming part of a communications system (**See Fig. 2**), the arrangement comprising:

One or more Local Area Network (**Fig. 2 shows area A,B, and C. Each of areas could be interpreted as LAN system.**); one or more gateway network elements connected to each LAN (**L2 is a gateway and connected to each LAN. See Fig. 2 and page 225.**), and one or more further network elements which, together with the one or more gateway elements, form at least a part of a routing area (**See Fig. 1, L1s are other network elements.**), the one or more gateway elements acting as an interface between the one or more further elements and the one or more LANS (**See Fig. 1, L2 is connected L1 and other LANs**), wherein the one or more further elements are intermediate systems (**L1 and L1 forms as IS-IS system. See Fig. 2.**), but the one or more gateway elements and the one or more further elements are configured such as to make the one or more further elements appears as end systems as far as the rest of the communications system is concerned (**See Fig. 2 and page 224 and 226. The system could act as ES-IS, which L1 becomes as end system.**)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ambrosoli et al.(TMN architecture for SDH networks using IS-IS routing protocol design and performances).

Regarding claims 29-30, Ambrosoli et al. teach each gateway network element has one or more digital communication channels connected to other elements (See Fig. 2.), each of the one or more DCCs being provided with manual end-system adjacencies for at least some of the further elements (page 226, sec 3.2.) and gateway network are configured as a Level 2 intermediate system to send the signal or packet to other domains (see Fig. 2) Ambrosoli et al. do not specifically teach each of the one or more DCCs has its "external domain" attribute flag set True and DCC is supplied with a length-zero reachable address prefix. However, Ambrosoli et al. teach creating entire routing subdomains containing only static routers and to interconnect these subdomains to the IS-IS network via reachable address prefixes (sec 3.2, page 226.) in order for two domains to connected the signaling of DCC has to be on Enable mode, which is true flag as claimed. Reachable address prefixes provides the guarantees correct interworking within the IS-IS network (See sec 3.2, page 226.) In other words, it would

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route packet to the destination. Therefore, the reachable address prefixes, taught by Ambrosoli et al., is the same as the length zero reachable address prefixes. Therefore, it would have been obvious to one who have ordinary skill in the art at the time the invention was made for DCC have attribute flag set True for the external domain and supply with a length-zero reachable address prefix because it would need to signal each domains for communication via a reachable address prefix.

Regarding claims 31-32, Ambrosoli et al. teach the gateway network element has two DCCs each of which gives access to one of the further elements on a corresponding DCC, the further elements being connected in a chain configuration so as to form a ring with the gateway network element (L2 is connected to L1 and further connected to other L2 to form a ring network configuration. See Fig. 2.)

Regarding claim 33, Ambrosoli et al. teach terminating further element being configured as a Level 2 intermediate system (page 225-226) The same basis and rationale as applied to claims 29-30 are applied to the remainder of the claim 33.

Regarding claims 34 and 38, Ambrosoli et al. teach gateway element having one or two channels provided with manual end-system adjacencies for all of the further elements (See Fig. 4.), and a static route record in which has been manually entered one or more ranges of consecutive system identifiers corresponding to the manual end-system adjacencies (Ambrosoli et al. teach using IS-IS protocol to detect the next network element and failure problem on manual and static routing. See page 226.)

Regarding claims 35-37, Ambrosoli et al. teach there are two of the gateway elements connected to respective ones of one or more LANs, and in which a plurality of

the one or more further elements is connected between the two gateway elements (There are at least two L2 connected to the LAN, and plurality of L1s connects to L2. See Fig. 2) the gateway network elements and the further elements has two DCCs, a first DCC of one gateway network element being connected to a DCC of a first one of the further elements, a second DCC of the same gateway network element being connected to a DCC of a second one of the further elements, a first DCC of the other gateway network element being connected to a DCC of a third one of the further elements, and a second DCC of the other gateway network element being connected to a DCC of a fourth one of the further element (See Fig. 2, L2 are connected two L1s for each area and L2 and L2 are connected to each other.) Ambrosoli et al. teach the system is manually routing (See page 226.) The same basis and rationale as applied to claims 29-30 are applied to the remainder.

Regarding claims 39, Ambrosoli et al. teach if there are two, equal cost manual adjacencies matching a destination address of a given packet and one of these is associated with a circuit on which the packet was received, then the packet is forward onto another circuit (when L2 receives the packet from Level 1, which all having equal cost matching a destination to OS, the packet is forward by L2 onto another circuit area. See Fig. 2)

Regarding claims 40-41, Ambrosoli et al. shows one network element could forward the message through the routing area to other further element, which is outside of part of the routing area but in the same areas as the further elements (NE 1 is routing to NE5, which is outside of routing domains but still in the same area of further

elements), which would be still in the Level 1 and having access to level 2 (See Fig. 4 and page 226.)

Regarding claims 42, Ambrosoli et al. shows elements configured as peripheral domain (See Fig. 2.)

Regarding claim 43, Ambrosoli et al. teach a plurality of nodes including a first set consisting of the further elements (L1 nodes in Level 1 is considered as first set, Fig. 2), and second set excluding the further elements, in which the second set comprises intermediate systems, in which each node in the second set has a connection to every other node in the second set, and in which the connections only pass through nodes of the second set (Level 2 is considered as second set. L2 nodes are intermediate systems and connected with other L2 nodes. See Fig. 2)

Regarding claim 44-45, further elements lie in a single IS-IS area and nodes of the second set which are directly connected to other further elements (See Fig. 2) In addition, the routing path is considered as the circuit.

Regarding claim 46, Ambrosoli et al. teach Hello protocol and sequence number protocol data is received from a node of the second set (See page 227.) Ambrosoli et al. do not specifically teach discarding hello message for the node directly connected to node on the second set. However, Hello message is well known to use for communicating with neighboring node in the same area or domain (eg. End system could send Hello message to his neighbor in the same area or domain, not through outside network area nodes.) Since, L2 nodes acts as gateway through different domains, it would have been obvious to one who have ordinary skill in the art at the time

the invention was made to discard the Hello message because this would avoid to send the Hello message to outside of the network domain.

8. Claims 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ambrosoli et al.(TMN architecture for SDH networks using IS-IS routing protocol design and performances), in view of Zadikian et al. (US Pat No. 6,724,757.)

Regarding claim 47, Ambrosoli et al. teach IS hello message and for maintaining a reachable address prefix of the second set while the path or routing is not failure (page 226-227.) Ambrosoli et al. does not specifically teach monitoring the hello packets and the system. However, Zadikian et al. teach monitoring level 1 and 2 routing operation and keep-alive message, which would be not discarded hello message (See col 20-21, lines 31-26, Zadikian et al.) Therefore, it would have been obvious to one who has ordinary skill in the art at the time the invention was made to have monitoring function because it would help the system stabilized and easier to detect the failure. Moreover, Ambrosoli et al. teach detect the failure (See page 226), and Zadikian et al. teach the system is related to SDH routing with DCCs (See col 21, lines 11-16, Zadikian et al.)

Regarding claim 48, Ambrosoli et al. teach the parameter could include the address information (See page 224) and Ambrosoli et al. further teach Setting IS-IS parameter on L1 or L2 for routing to ES (See page 227 and fig. 5.)

Regarding claim 49, Ambrosoli et al. teach L1s connected to L2s, which on the second set (See Fig. 2), and also teach detecting the failure (See page 226.)

Regarding claim 50, Ambrosoli et al. teaches when network topology change or change in the network configuration parameters occurs, LSP messages are generated and sends to IS nodes (See page 227.)

Regarding claims 51 and 53, Ambrosoli et al. teach SDH transmission system (Fig. 5.). Since Q-interface is used for Sonet/SDH systems defined in most ITU-T specifications; therefore, it would inherently use Q-interface because Ambrosoli et al. teach SDH system.

Regarding claim 52, the same basis and rational as applied to claim 41 are applied.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Liou whose telephone number is 571-272-8136. The examiner can normally be reached on 8:00AM - 5:00PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jonathan Liou

1/12/2006



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SUPERVISORY PATENT EXAMINER